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IN THE CLAIMS:

Please cancel claim ~~36~~ 37 and amend the claims as follows:

1-21. (Cancelled)

1. ~~22.~~ (Currently Amended) A method for processing a substrate, comprising:

depositing an electrically conductive seed layer onto a substrate;

immersing the substrate into a plating solution; and

plating metal ions from the plating solution onto the substrate ~~during the~~ while immersing the substrate ~~process~~ by applying a ~~plating~~ bias to the substrate at a charge density between about 20 mA*sec/cm^2 and about 160 mA*sec/cm^2.

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2. ~~23.~~ (Currently Amended) The method of claim ~~22~~ 21, wherein applying a ~~plating~~ bias to the substrate comprises applying a bias between about 0.8 volts and about 20 volts for a period of time sufficient to compensate for etching of the seed layer by the plating solution ~~during the~~ while immersing the substrate ~~process~~.

3. ~~24.~~ (Currently Amended) The method of claim ~~23~~ 22, wherein the ~~plating~~ bias is applied between about 0.1 seconds and about 4 seconds.

4. ~~25.~~ (Previously Presented) The method of claim ~~22~~ 21, wherein plating metal ions from the plating solution comprises plating a layer of metal ions onto the seed layer, wherein the layer of metal ions has a thickness of between about 50Å and about 250Å.

5. ~~26.~~ (Previously Presented) The method of claim ~~22~~ 21, wherein the metal ions comprise at least one of copper, nickel, and tungsten.

6. ~~27.~~ (Currently Amended) The method of claim ~~22~~ 21, wherein ~~the~~ applying ~~the plating~~ a bias to the substrate surface comprises applying an increasing ~~plating~~ bias to the substrate ~~during the~~ while immersing the substrate ~~process~~.

7. 27. (Currently Amended) The method of claim ~~22~~ 1, wherein ~~the~~ applying ~~the plating~~ a bias to the substrate surface comprises applying a pulse modulated ~~plating~~ bias to the substrate ~~during the~~ while immersing the substrate ~~process~~.

8. 28. (Previously Presented) The method of claim ~~22~~ 1, wherein plating metal ions from the plating solution comprises plating an alloy layer onto the seed layer.

9. 29. (Currently Amended) A method for electrochemically plating a ~~first~~ metal layer onto a substrate surface having high aspect ratio features formed thereon, comprising:

depositing a seed layer over the substrate surface ~~and features~~;

immersing the substrate surface ~~and features~~ into an electrochemical plating solution; and

applying a ~~plating~~ bias at a charge density of between about 20 mA*sec/cm^2 and about 160 mA*sec/cm^2 ~~during the~~ while immersing the substrate surface ~~process to deposit a first metal layer on the seed layer~~.

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10. 30. (Currently Amended) The method of claim ~~29~~, wherein applying ~~the plating~~ a bias comprises applying an increasing plating bias to the substrate ~~during the~~ while immersing the substrate ~~process~~ or applying a pulse modulated plating bias to the substrate ~~during the~~ while immersing the substrate surface ~~process~~.

11. 31. (Currently Amended) The method of claim ~~29~~, wherein the ~~plating~~ bias is applied for a duration of between about 0.5 seconds and about 2 seconds.

12. 32. (Currently Amended) The method of claim ~~29~~, wherein applying ~~the plating~~ a bias comprises applying a bias between about 0.8 volts and about 20 volts to the seed layer for a period of time between about 0.1 second and about 4.0 seconds ~~during the~~ while immersing the substrate surface ~~process~~.

13. 34. (Currently Amended) The method of claim 29, further comprising plating a ~~second~~ metal layer over the ~~first metal~~ seed layer via an electrochemical plating process after the seed layer is fully immersed in the electrochemical plating solution.

14. 34. (Currently Amended) The method of claim [[29]] 33, wherein the ~~first~~ metal layer is a metal alloy layer.

15. 35. (Currently Amended) A method for electrochemically plating ~~immersing~~ a substrate ~~into a plating solution~~, comprising immersing the substrate into ~~the~~ a plating solution while simultaneously applying a charge density of between about 20 mA*sec/cm^2 and about 160 mA*sec/cm^2, wherein the charge density is applied by applying a bias between about 0.8 volts and about 20 volts to the substrate for a period of between about 0.1 seconds and about 4 seconds.

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16. 36. (Cancelled)

37. (Currently Amended) The method of claim 35, wherein the ~~plating~~ bias causes the deposition of a patching layer over a seed layer formed onto the substrate ~~during the~~ while immersing the substrate ~~process~~.

17. 38. (Previously Presented) The method of claim 37, wherein the patching layer comprises a metal alloy layer.

CLAIMS:

1. A method for processing a substrate, comprising:

a) positioning a substrate having a first conductive material disposed thereon in a processing chamber containing an electrochemical bath;

b) depositing a second conductive material on the first conductive material as the conductive material is contacted with the electrochemical bath by applying a plating bias to the substrate while immersing the substrate into the electrochemical bath; and

c) depositing a third conductive material in situ on the second conductive material by an electrochemical deposition technique to fill the feature.

2. The method of claim 1, wherein applying the bias to the substrate comprises applying a voltage of between about 0.8 volts and about 20 volts.

3. The method of claim 1, wherein the bias is applied for a period of time between about 0.1 seconds and about 4 seconds.

4. The method of claim 1, wherein applying the bias to the substrate comprises applying a voltage of between about 5 volts and about 20 volts for a period of time between about 0.5 seconds and about 2 seconds.

5. The method of claim 1, wherein electrochemical deposition technique comprises a pulse plating technique.

6. The method of claim 1, wherein applying the bias to the substrate comprises exposing the substrate to a charge density between about 20 mA*sec/cm^2 and about 160 mA*sec/cm^2.

7. The method of claim 1, wherein the first, second, and third conductive materials are selected from the group of copper, doped copper, copper alloys, and combinations thereof.

8. A method for electrochemically depositing a conductive material into a high

aspect ratio structure on a substrate, comprising:

a) depositing a seed layer in the high aspect ratio structure on the substrate;

b) applying a plating bias over the substrate by exposing the substrate to a charge density between about 20 mA*sec/cm^2 and about 160 mA*sec/cm^2 while immersing the substrate into an electrochemical bath to deposit a patching layer in the high aspect ratio structure; and

c) depositing a conductive material on the patching layer in situ to fill the high aspect ratio structure.

9. The method of claim 8, wherein the charge density comprises applying a voltage of between about 0.8 volts and about 20 volts for a period of time between about 0.1 seconds and about 4 seconds.

10. The method of claim 8, wherein the seed layer, the patching layer, and the conductive materials are selected from the group of copper, doped copper, copper alloys, and combinations thereof.

11. A method for filling a high aspect ratio structure on a substrate in an electrochemical bath, comprising:

a) providing a substrate having discontinuous conductive layers formed thereon;

b) reducing the formation of discontinuous conductive layers and minimizing agglomeration of subsequently deposited conductive material while immersing the substrate into the electrochemical bath; and

c) filling the high aspect ratio structure with a conducive material.

12. The method of claim 11, wherein the reduction of the formation of discontinuous conductive layers and minimizing agglomeration of subsequently deposited conductive material comprises applying a plating bias to the substrate while immersing the substrate into an electrochemical bath.

13. The method of claim 12, wherein applying the bias to the substrate comprises applying a voltage of between about 0.8 volts and about 20 volts.

14. The method of claim 12, wherein the bias is applied for a period of time between about 0.1 seconds and about 4 seconds.

15. The method of claim 12, wherein applying the bias to the substrate comprises applying a voltage of between about 5 volts and about 20 volts for a period of time between about 0.5 seconds and about 2 seconds.

16. The method of claim 12, wherein filling the high aspect ratio structure with a conducive material comprises a pulse plating technique.

17. The method of claim 16, wherein the electrochemical deposition technique comprises a pulse plating technique.

18. The method of claim 12, wherein applying the bias to the substrate comprises exposing the substrate to a charge density between about 20 mA*sec/cm^2 and about 160 mA*sec/cm^2.

19. The method of claim 18, wherein the charge density is selected based upon the amount of material to be deposited.

20. The method of claim 1, wherein the charge density is selected based upon the amount of second conductive material to be deposited.

21. The method of claim 8, wherein the charge density is selected based upon the amount of patching layer material to be deposited.

34. (New) The method of claim 29, wherein the first layer is a metal alloy layer.

35. (New) A method for immersing a substrate into a plating solution, comprising immersing the substrate into the plating solution while simultaneously applying a charge density of between about 20 mA*sec/cm^2 and about 160 mA*sec/cm^2.

36. (New) The method of claim 35, wherein the charge density is applied by applying a plating bias between about 0.8 volts and about 20 volts to the substrate for a period of between about 0.1 seconds and about 4 seconds.

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37. (New) The method of claim 35, wherein the plating bias causes the deposition of a patching layer over a seed layer formed onto the substrate during the immersing process.

38. (New) The method of claim 37, wherein the patching layer comprises a metal alloy layer.